

1/9

11 20 29 38 47 56
5' CTG CGT CAG GTC CGG GCT CCT GGA CTT CGC CTT TCC CGA GCC CTG GAG GTG GGG

65 74 83 92 101 110
AGA AAA GGT TCA CCA ATT TTT AAA ATC CAA ATA TAT CTC ATG GTA CAG TGG AAG

119 128 137 146 155 164
AAC TGG CCA GAG AGT CTG GAA GTT TGG GTT CTG GTC CTG GCT GTG CCA CTG ACT

173 182 191 200 209 218
CAC TGT GAC CTT GGG ATC TTG TGC TGT GAA GAC ATT TCC CAA GTG CTT CAT GTT

227 236 245 254 263 272
AGC CAG CAA ATC TGA CCC ACA AGG CCT GGA AAG AGG TGA TTG TTA GGT TGC GCA

281 290 299 308 317 326
GAG GTG GTC TTA TCC AGC TCA GCT TCC CCT GGG ACC CAC CGT GGG ACC TGA GGC

335 344 353 362 371 380
AGA ACT GGG GTG GAC TTG GCC TCC TCC ATG GCA CAC CGG CTG CAG ATA CGA CTG
M A H R L Q I R L

FIGURE 1A

389 CTG ACG TGG GAT GTG AAG GAC ACG CTG CTC AGG CTC 416 425 434
L T W D V K D T L L R L R H P L G E GAG
443 GCC TAT GCC ACC AAG GCC CGG GCC CAT GGG CTG GAG GTG GAG CCC TCA GCC CTG
A Y A T K A R A H G L E V E P S A L 488
497 GAA CAA GGC TTC AGG CAG GCA TAC AGG GCT CAG AGC CAC AGC TTC CCC AAC TAC
E Q G F R Q A Y R A Q S H S F P N Y 542
551 GGC CTG AGC CAC GGC CTA ACC TCC CGC CAG TGG TGG CTG GAT GTG GTC CTG CAG
G L S H G L T T S R Q W W L D V V L Q 596
605 ACC TTC CAC CTG GCG GGT GTC CAG GAT GCT CAG GCT GTA GCC CCC ATC GCT GAA
T F H L A G V Q D A Q A V A P I A E 650
659 CAG CTT TAT AAA GAC TTC AGC CAC CCC TGC ACC TGG CAG GTG GTG GAT GGG GCT
Q L Y K D F S H P C T W Q V L D G A 704
713 GAG GAC ACC CTG AGG GAG TGC CGC ACA CGG GGT CTG AGA CTG GCA GTG ATC TCC
E D T L R E C R T R G L R L A V I S 758

FIGURE 1B

767	776	785	794	803	812
AAC TTT GAC CGA CGG CTA GAG GGC ATC CTG GGG GGC CTT GGC CTG CGT GAA CAC					
N F D R R R L E G I L G G L G L R E H					
821	830	839	848	857	866
TTC GAC TTT GTG CTG ACC TCC GAG GCT GCT GGC TGG CCC AAG CCG GAC CCC CGC					
F D F V L T S S E A A A G W P K P D P R					
875	884	893	902	911	920
ATT TTC CAG GAG GCC TTG CGG CTT GCT CAT ATG GAA CCA GTA GTG GCA GCC CAT					
I F Q E A L L R L A A H M E P V A A H					
929	938	947	956	965	974
GTT GGG GAT AAT TAC CTC TGC TGC GAT TAC CAG GGG CCT CGG GCT GTG GGC ATG CAC					
V G D N Y L L C D Y Q G P R A V G M H					
983	992	1001	1010	1019	1028
AGC TTC CTG GTG GTT GGC CCA CAG GCA CTG GAC CCC CTG GAC AGG GAT TCT GTA					
S F L V V G G P Q A L L D P P V V R D S V					
1037	1046	1055	1064	1073	1082
CCT AAA GAA CAC ATC CTC CCC TCT CTG GCC CAT CTC CTG CCT GCC CTT GAC TGC					
P K E H I L L P S L A A H L L L P A L D C					
1091	1100	1109	1118	1127	1136
CTA GAG GGC TCA ACT CCA GGG CTT TGA GGC CAG TGA GGG AAG TGG CTG GGC CCT					
L E G S T P G L					

FIGURE 1C

1145	1154	1163	1172	1181	1190
AGG CCA TGG AGA AAA CCT TAA ACA AAC CCT GGA GAC AGG GAG CCC CTT CTT TCT					
1199	1208	1217	1226	1235	1244
CCA CAG CTC TGG ACC TTT CCC CCT CTC CCT GCG GCC TTT GTC ACC TAC TGT GAT					
1253	1262	1271	1280	1289	
AAT AAA GCA GTG AGT GCT GAG CTC TCA CCC TTC CCC CAC TAA AAA AAA AA 3'					

FIGURE 1D

10 5' CCA CGC GTC CGG TTC CGT TCA ACG AAG TGG TTG CTT TTT TTA GTT CCG GCA ATG 55
 19 28 37 46 M
 64 73 82 91 100 109
 AGT TGC GCC GGG GCG GCT CCC CGC CTT TGG CGG CTG CGC CCA GGG GCC
 S C A G A A A A P R L R P G A
 118 127 136 145 154 163
 CGG CGG TCC CTC TCA GCT TAT GGA AGA AGA ACC AGT GTC AGA TTT CGC AGT TCA
 R S L S A Y G R R T S V R F R S S
 172 181 190 199 208 217
 GGA ATG ACT TTA GAC AAT ATC AGT CGG GCA GCT GTG GAT CGA ATA ATC CGG GTG
 G M T L D N I S R A A V D R I I R V
 226 235 244 253 262 271
 GAT CAT GCA GGC GAA TAT GGA GCA AAC CGC ATC TAT GCC GGG CAG ATG GCT GTC
 D H A G E Y G A N R I Y A G Q M A V
 280 289 298 307 316 325
 CTG GGT CGG ACC AGC GTC GGG CCA GTC ATT CAG AAA ATG TGG GAT CAA GAA AAG
 L G R T S V G P V I Q K M W D Q E K
 334 343 352 361 370 379
 GAC CAT TTG AAA AAG TTC AAT GAG TTG ATG GTT ATG TTC AGG GTC CGG CCA ACA
 D H L K K F N E L M V M F R V R P T

FIGURE 2A

388 433
GTT CTG ATG CCC TTG TGG AAC GTG CTG GCG GCG ACC GCC
V L M P L W N V L G A G T A

442 487
TTG CTC GGG AAG GAA GGT GCC ATG GCC TGC ACC GTG GCG GAA GAG AGC ATA
L L G K E G A M A C T V A V E S I

496 541
GCA CAT CAC TAC AAC AAC CAG ATC AGG ACG CTG ATG GAG GAG CCT GAA AAA
A H Y N N Q I R T L M E E D P E K

550 595
TAC GAG GAA CTT CTT CAG CTG ATA AAG AAA TTT CGG GAT GAA GAG CTT GAG CAC
Y E L L Q CAG CTG ATA AAG AAA TTT CGG GAT GAA GAG CTT GAG CAC

604 649
CAT GAC ATA GGC CTC GAC CAT GAT GCA GAA TTG GCT CCA GCC TAT GCC GTC CTG
H D I G L D H D A E L A P A Y A V L

658 703
AAG AGC ATT ATC CAG GCC GGA TGC AGA GTG GCG ATA TAT TTA TCA GAA AGA TTA
K S I I Q A G C R V A I Y L S E R L

712 757
TAA AGT GTG TCC AGT TTT GCC TGT CTA TAA AAG ATG ATA GTA ATT TAC CAA GTG
721 730 739 748

FIGURE 2B

766 775 784 793 802 811
ACA TTT GCA GAG AAG CAG GTG TAC AGT TAT CGT TGT ACT TTT GTA CAA TGT GAA

820 829 838 847 856 865
TTT TGT TAA TAA ATT ATA AGG TTT GTT TTT TTT TTA AAC TCT GCA GTG TTG

874 883 892 901 910 919
ATT TTT CTC TGG GTT GTT TTT TCT GCC ATG AGA CCA ACA GGT CAC CAG CCT TGT

928 937
TCA AGT TAC AGC AAA CGA AGC TGG G 3'

FIGURE 2C

1 M S C A G A A - - - - - A A P R L W R L R P G A R R S L S 2267905
 1 M S A A G A I - - - - - A A A S V G R L R T G V R R P F S 93415017
 1 M A H R L Q I R L L T W D V K D T L L R L R H P L G E A Y A 1581473
 1 M R S L S R F R L I T F D V T N T L L Q F R T T P G K Q Y G 91561732

 25 A Y G R R T S V R F R S S G M T - - - - - L D N I S R A A V D R I 2267905
 25 E Y G R G L I I R C H S S G M T - - - - - L D N I N R A A V D R I 93415017
 31 T K A R A H G L E V E P S A L E Q G F R Q A Y R A Q S H S F 1581473
 31 E I G A L F G A R C D N N E L A K N F K A N W Y K M N R D Y 91561732

 53 I R V D H A G E Y G A N R - - - - - I Y A G Q M A 2267905
 53 I R V D H A G E Y G A N R - - - - - I Y A G Q M A 93415017
 61 P N Y G - - L S H G L T S R Q W W L D V V L Q T F H L A G V 1581473
 61 P N F G R D T N P Q M E W Q Q W W R K L I A G T F A E S G A 91561732

 73 V L G R T S V G P V I Q K M - - - - - W D Q E K D H 2267905
 73 V L G R T S V G P V I Q K M - - - - - W D Q E K N H 93415017
 89 Q D A Q A - V A P I A E Q L Y K D F S H P C T W Q V L D G A 1581473
 91 A I P D E K L H N F S N H L I E L Y K T S I C W Q P C N G S 91561732

 94 L K K F N E - - - - - L M V M F R V R P T 2267905
 94 L K K F N E - - - - - L M I A F R V R P T 93415017
 118 E D T L R E C R T R G L R - - - - - L A V I S N F D R R L E 1581473
 121 V E L L Q Q L R - K E L K P E K C K L G V I A N F D P R L P 91561732

FIGURE 3A

110 V L M P - - - L W N V L G F A L G A G T A L L G K E G A M A 2267905
110 V L M P - - - L W N V A G F A L G A G T A L L G K E G A M A g3415017
143 G I L G G L G L R E H F D F V L T S E A A G W P K P D P R I 1581473
150 T L L Q N T K L D Q Y L D F A I N S Y E V Q A E K P D P Q I g1561732

137 C T V A V E E S I A H H Y N N Q I R T L M E E D P E - K Y - 2267905
137 C T V A V E E S I A N H Y N N Q I R M L M E E D P E - K Y - g3415017
173 F Q E A L R - - - L A H M E P V V A A H V G D N Y L C D Y Q 1581473
180 F Q K A M E K S G L K N L K P E E C L H I G D G P T T D Y L g1561732

165 - - - - - E E L L Q L I K K F R D E E L E H H D I G L D 2267905
165 - - - - - E E L L Q V I K Q F R D E E L E H H D T G L D g3415017
200 G P R A V G M H S F L V V G P Q A L D P V V R - - - D S V P 1581473
210 A A K E L G W H S A L V H E - K S Y A Y L V K K Y G E D I D g1561732

188 H D A E L A P A Y A V L K S I I Q A G C R V A I Y L S E R L 2267905
188 H D A E L A P A Y A L L K R I I Q A G C S A A I Y L S E R F g3415017
227 K E H I L P S L A H L L P A L - - - D C L E G S - - T P G L 1581473
239 R D H V F P S L Y D F H K K - - - - I S D G - - A V V W g1561732

FIGURE 3B